



*DoD PBFA Working Group Meeting*  
*NASA Advanced Air Mobility Mission*

*January 26, 2022*





# Strong Domestic (e)VTOL Industry Base





## UAM Maturity Levels (UML)

- UML-4 Medium Density/Complexity, collaborative and responsible automated systems
- UML-3 Low Density, Medium Complexity, comprehensive safety assurance automation
- UML-2 Low Density/Complexity, assistive automation
- UML-1 Conforming prototypes

# Advanced Air Mobility (AAM) Mission



*Safe, sustainable, affordable, and accessible aviation for transformational local and intraregional missions*





# NASA Role to Address AAM Challenges



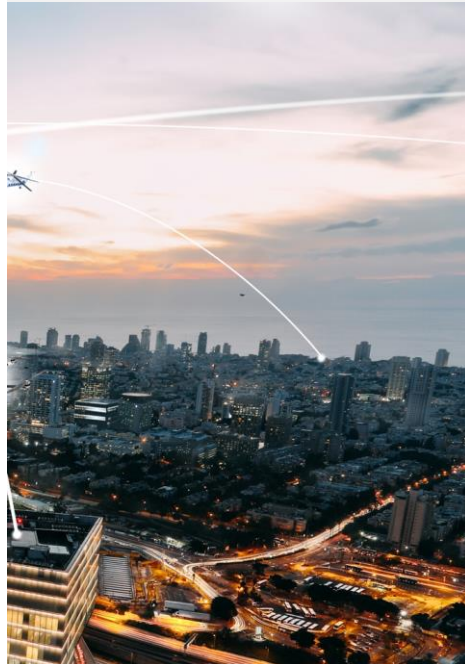
## Vehicle Development and Operations



## Airspace Design and Operations



## Community Integration



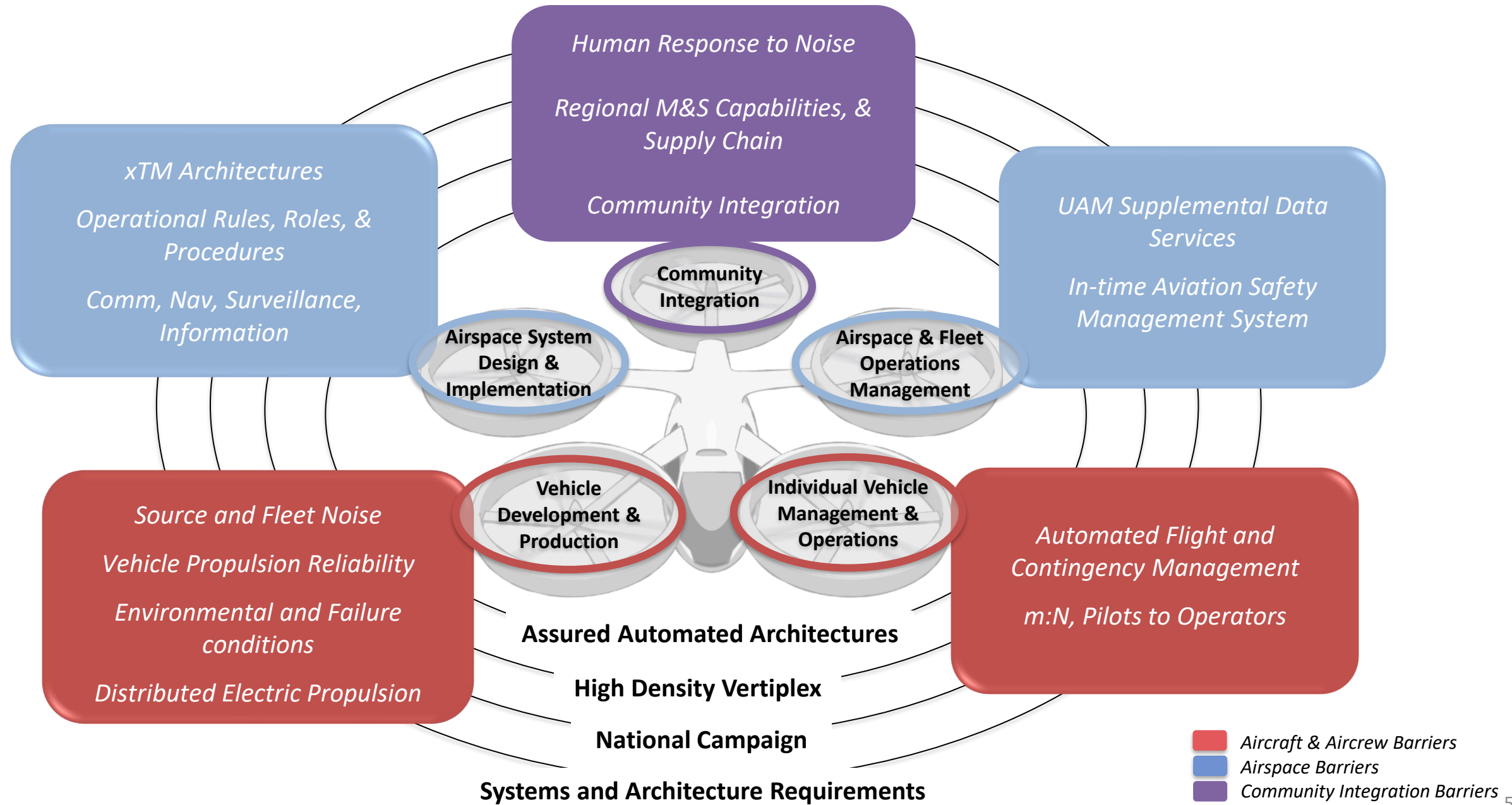
**NASA and key partners are collectively taking on the most difficult mission challenges to enable industry to flourish by 2030**

- **Research and Development Portfolio**
- **AAM National Campaign Series**
- **Robust Ecosystem Partnerships**

**NASA to deliver long term technical solutions and architecture requirements for the industry and regulatory communities**

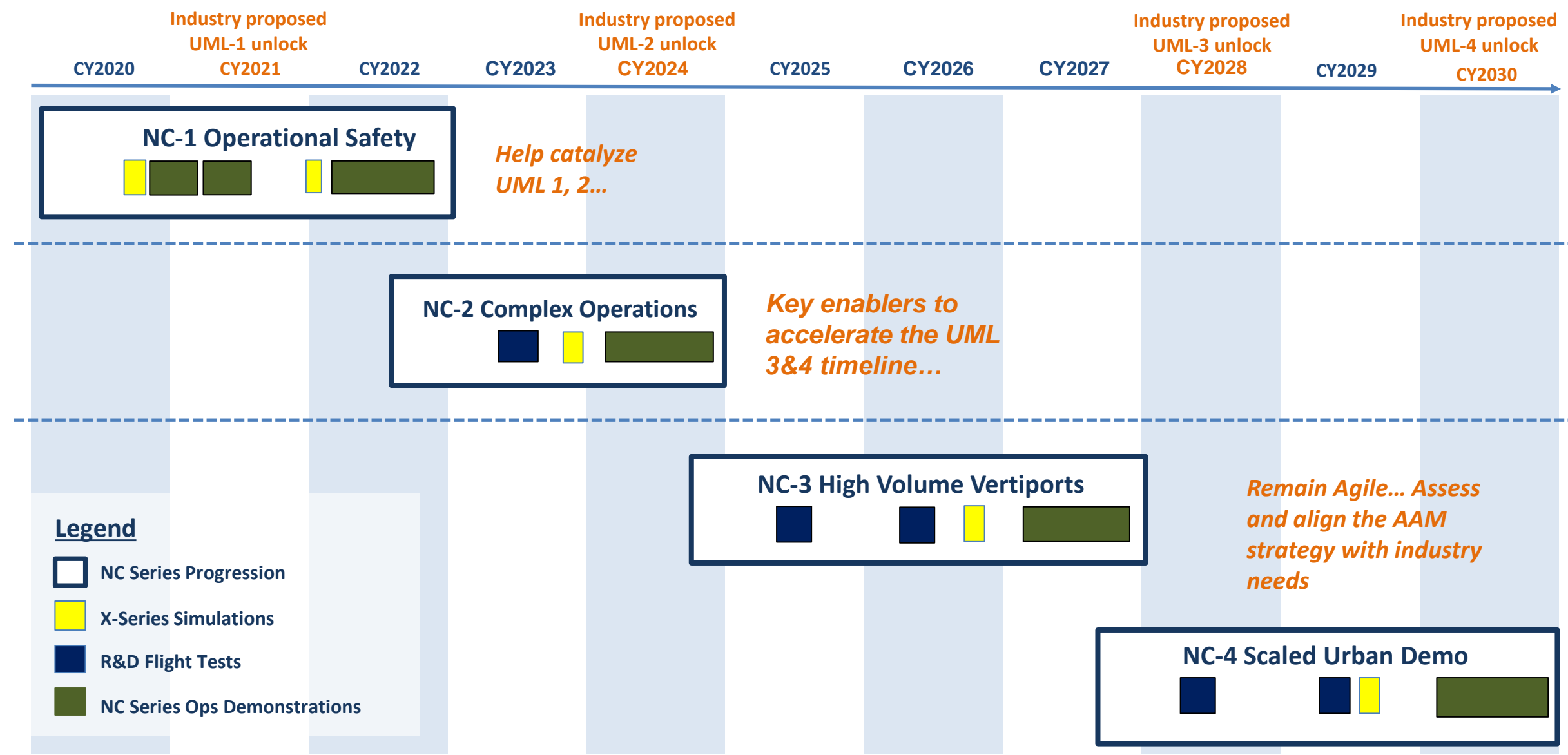


# NASA AAM Mission Priorities





# National Campaign Series support of the Industry Timeline





# AAM Ecosystem Working Group (AEWG)

<https://nari.arc.nasa.gov/aam-portal/>

Align on a common vision  
for AAM

Learn about NASA's research and  
planned transition paths

Adopt a strategy for engaging the  
public on AAM



Collectively identify and  
investigate key hurdles and  
associated needs

Develop AAM system and  
architecture requirements

Support regulatory and  
standards development

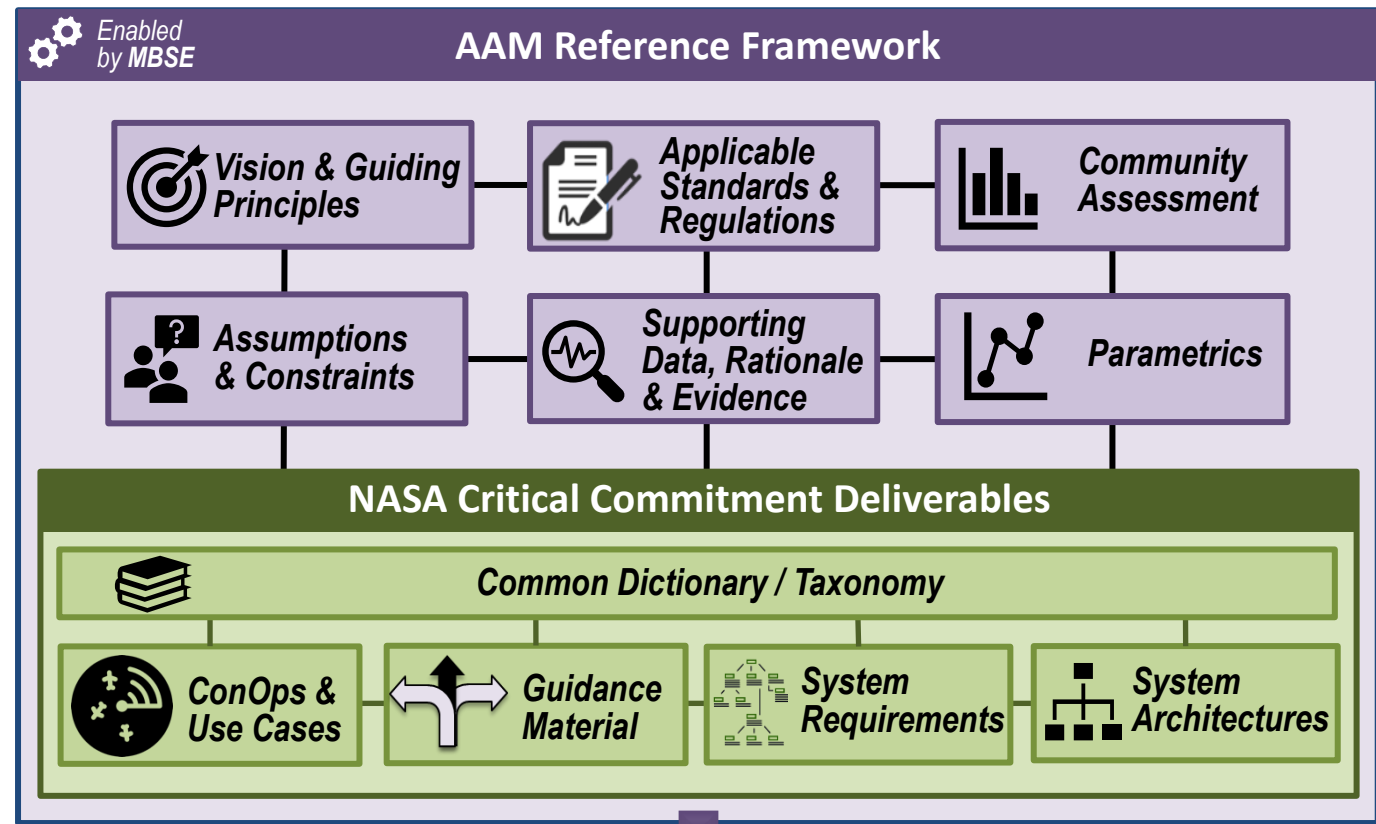
***Form a connected stakeholder community***

Accelerate the development of safe and scalable AAM flight operations  
by bringing together the broad and diverse ecosystem



# NASA AAM MBSE Framework

*NASA is using a Model-based System Engineering approach to capture and organize the elements of a medium density/complexity “Book of Requirements and Guidelines (BoRG)”*



*AAM System and Architecture Requirements*

## **AAM Mission Critical Commitment:**

Based on validated operational concepts, simulations, analyses, and results from National Campaign demonstrations, the AAM Mission will deliver aircraft, airspace, and infrastructure system and architecture requirements to enable sustainable and scalable medium density advanced air mobility operations





Questions?